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KLEIN, O'NEILL, & SINGH, LLP			EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/559,505	Applicant(s) WOLLENBERG, PEER W
	Examiner HEIDI RIVIERE	Art Unit 3689

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on **18 May 2010**.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) **21-30** is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) **21-30** is/are rejected.
- 7) Claim(s) **21** is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____
- 5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed **9 March 2010** have been fully considered but they are not persuasive. Any arguments, rejections and discussions regarding claims 1-20 are currently moot as these claims have been cancelled including the 35 USC 112 paragraph 2 and the 35 USC 101 rejections. Please note the rejections of the new claims below.
2. The specification has been amended and therefore the objection is withdrawn.
3. Please note the 35 USC 101 rejection of claim 25 below.

Claim Objections

4. **Claim 21** is objected to because of the following informalities: Claim 21 contains the phrase "providing system comprising" which seems to be grammatically incorrect. Appropriate correction is required.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. **Claim 25** rejected under 35 U.S.C. 101. Based on Supreme Court precedent and recent Federal Circuit decisions, the Office's guidance to an examiner is that a § 101 process must (1) be tied to a particular machine or apparatus or (2) transform underlying subject matter (such as an article or materials) to a different state or thing.

Diamond v. Diehr, 450 U.S. 175, 184 (1981); Parker v. Flook, 437 U.S. 584, 588 n.9 (1978); Gottschalk v. Benson, 409 U.S. 63, 70 (1972); Cochrane v. Deener, 94 U.S. 780, 787-88 (1876).

To qualify as a § 101 statutory process, the claim should recite the particular machine or apparatus to which it is tied, for example by identifying the machine or apparatus that accomplishes the method steps, or positively reciting the subject matter that is being transformed, for example by identifying the material that is being changed to a different state.

There are two corollaries to the machine-or-transformation test. First, a mere field-of-use limitation is generally insufficient to render an otherwise ineligible method claim patent-eligible. This means the machine or transformation must impose meaningful limits on the method claim's scope to pass the test. Second, insignificant extra-solution activity will not transform an unpatentable principle into a patentable process. This means reciting a specific machine or a particular transformation of a specific article in an insignificant step, such as data gathering or outputting, is not sufficient to pass the test.

Here, applicant's method steps fail the first prong of the new test because they are not tied to a machine or apparatus. Here claim 25 teaches the method steps of calculating a radiation dose. These steps can be performed manually as a machine is not necessary to do math.

Further, applicant's method steps fail the second prong of the test because the claimed steps do not result in an article being transformed from one state to another.

There is no transformation occurring in the claims for a physical object or substance or data that represents physical objects or substances.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 21-30** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lilly (US 2002/0103968 A1)** in view of **Duftschmid et al. (US 5/841,142)** (hereinafter "Duftschmid").

9. **With respect to claim 21: (New) Lilly teaches:**

- (a) providing system comprising a central computer programmed to register and process electronic data representing information in a flight logbook of the person, and at least one terminal configured to provide data input to the central computer; (Lilly: Figs. 1, 5 and 7; paragraphs 41-42, 122; pilot computer to enter data in ilogbook) and
- (b) inputting data to the computer, wherein the input data include information relating to the identity of the person, the date of the flight, a flight identification number, flight duration time, and departure and arrival locations of the flight; and wherein the inputting of the data to the computer is performed by (1) obtaining access to the at least one terminal

by verifying the conforming of an inputted password with the identity of the person, and (2) inputting the data, including any needed corrections of erroneous data, into the at least one terminal; (Lilly: Figs. 17a, 17b, 19a, 19b and 26C - pilot name, flight information; departure and arrival location; Figs. 17b, 19A; paragraphs 145-149 – passwords and unique user identification; first user inputs and edits information while second user has the ability to view information; information stored on device; system can be searched aircraft make and model information entered and is searchable)

Lilly does not teach, however Duftschmid teaches:

- (c) calculating a radiation dose to which the person is exposed based on observatory data available from at least one observatory. (Duftschmid: col. 3, lines 10-65, col. 4, lines 1-67 – measurement process consists of longitude, latitude and altitude data; system determines radiation dosage)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Lilly and Duftschmid. Lilly teaches the storing and input of biomedical data, see Fig. 1 of Lilly. Lilly also teaches the input of flight and personnel related information within the system. Duftschmid states (col. 5, lines 40-48) "the computer can include a memory device for the storage of the dosage values in real time, so that the total actual radiation exposure for the flight can be scanned at all times and as a result of the flight plans can be coordinated electronic data-wise according to the respective flight personnel.")

10. **With respect to claim 22:** (New) Lilly teaches (d) storing the data in the computer so as to prevent a subsequent correction of any of the input data. (Lilly Fig. 1 - storing and input of biomedical data)
11. **With respect to claim 23:** (New) Lilly teaches (e) accessing the central computer for obtaining an output of the data regarding the person by inputting the password. (Lilly: Fig. 7 – report printed)
12. **With respect to claim 24:** (New) Lilly teaches the limitations cited in the rejections above. Lilly does not teach, however Duftschmid teaches the system further comprises a GPS unit operable to calculate the longitude, the latitude and the altitude of the aircraft. (Duftschmid: col. 2, col. 3, line 10- col.4, line 67 - the calculation process involves "measuring at least one of the altitude and geographic location of the airplane"; "portion (contribution) factor is calculated which indicates the contribution of the neutron radiation ...of the cosmic radiation for the total effective equivalent dosage; geographic location of plane measured with GPS system; radiation measured in value of exposure per hour)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Lilly and Duftschmid. Lilly teaches the storing and input of biomedical data, see Fig. 1 of Lilly. Lilly also teaches the input of flight and personnel related information within the system. Duftschmid states (col. 5, lines 40-48) "the computer can include a memory device for the storage of the dosage values in real time, so that the total actual radiation exposure for the flight can be scanned at all times

and as a result of the flight plans can be coordinated electronic data-wise according to the respective flight personnel.")

13. **With respect to claim 25:** (New) Lilly teaches the limitations cited in the rejections above. Lilly does not teach, however Duftschmid teaches:

- (1) creating a great circle arc between the departure location and the arrival location; (2) dividing the great circle arc into a number of reference points that correspond to the number of minutes of the flight; (3) calculating the latitude, longitude, and altitude of the aircraft at each of the reference points of the great circle arc; (4) calculating the radiation dose per hour at each of the reference points with a neutron counting number of the time by means of a function with a set of predetermined constants that are selected from the calculated altitude of the aircraft at a time corresponding to each of the reference points; (5) correcting the radiation dose per hour to the calculated latitude, longitude, and altitude at each of the reference points by getting a quotient for the actual latitude, longitude, and altitude of the aircraft from a position database, and then multiplying the radiation dose per hour at each of the reference points by the quotient; (6) dividing the result of step (5) by 60 to obtain a calculated partial radiation dose at each of the reference points; and (7) upon completion of steps (1) through (6) for all of the reference points, summing the calculated partial radiation doses for all of the reference points.
(Duftschmid: col. 2, col. 3, line 10- col.4, line 67 - the calculation process

involves "measuring at least one of the altitude and geographic location of the airplane"; "portion (contribution) factor is calculated which indicates the contribution of the neutron radiation ...of the cosmic radiation for the total effective equivalent dosage; geographic location of plane measured with GPS system; radiation measured in value of exposure per hour)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Lilly and Duftschmid. Lilly teaches the storing and input of biomedical data, see Fig. 1 of Lilly. Lilly also teaches the input of flight and personnel related information within the system. Duftschmid states (col. 5, lines 40-48) "the computer can include a memory device for the storage of the dosage values in real time, so that the total actual radiation exposure for the flight can be scanned at all times and as a result of the flight plans can be coordinated electronic data-wise according to the respective flight personnel.")

14. **With respect to claim 26:** (New) Lilly teaches the at least one terminal includes a computer unit selected from the group consisting of at least one of a PC with a control program for the execution of the data inputting steps, and an electronic data registration device connected to a global computer network for the inputting of the data into the central computer via the global computer network. (Lilly: Figs. 1, 5 and 7; paragraphs 41-42, 122; pilot computer to enter data in ilogbook)

15. **With respect to claim 27:** (New) Lilly teaches the limitations cited in the rejections above. Lilly does not teach, however Duftschmid teaches the data input into the central computer further comprise information regarding weather and low visibility

conditions for the flight. (Duftschmid: col. 6, lines 30-50- – "A further alternative can comprise that the portion factors for the entire earth surface need not be carried (in the computer), but rather, for example, only those for the northern or southern hemispheres or even only those for a specific flight route under the consideration of possible alternate routes in the case of inclement weather, etc.")

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Lilly and Duftschmid. Lilly teaches the storing and input of biomedical data, see Fig. 1 of Lilly. Lilly also teaches the input of flight and personnel related information within the system. Duftschmid states (col. 5, lines 40-48) "the computer can include a memory device for the storage of the dosage values in real time, so that the total actual radiation exposure for the flight can be scanned at all times and as a result of the flight plans can be coordinated electronic data-wise according to the respective flight personnel.")

16. **With respect to claim 28:** (New) Lilly teaches the electronic data input into the central computer further comprise data regarding characteristics of the aircraft. (Lilly: Figs. 12B-12C – contains aircraft information)

17. **With respect to claim 29:** (New) Lilly teaches the output of the data includes an authenticity code generated on the basis of data regarding the person, the complete time of the flight, and the date and hour of the output. (Lilly: Figs. 7, 17b, 19A and 26C; paragraphs 145-149 – report printed; passwords and unique user identification; first user inputs and edits information while second user has the ability to view information;

information stored on device; system can be searched aircraft make and model information entered and is searchable; user name on report)

Furthermore, the data identifying a code use just for identification is non-functional descriptive data.

When presented with a claim comprising descriptive material, an Examiner must determine whether the claimed nonfunctional descriptive material should be given patentable weight. The Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art. *In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401,404 (Fed. Cir. 1983). The PTO may not disregard claim limitations comprised of printed matter. See *Gulack*, 703 F.2d at 1384-85,217 USPQ at 403; see also *Diamond v. Diehr*, 450 U.S. 175, 191,209 USPQ 1, 10 (1981). However, the examiner need not give patentable weight to descriptive material absent a new and unobvious functional relationship between the descriptive material and the subset. See *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994); *In re Ngai*, 367 F.3d 1336, 1338, 70 USPQ2d 1862, 1863-64 (Fed. Cir. 2004). Thus, when the prior art describes all the claimed structural and functional relationships between the descriptive material and the subset, but the prior art describes a different descriptive material than the claim, then the descriptive material is nonfunctional and will not be given any patentable weight. That is, such a scenario presents no new and unobvious functional relationship between the descriptive material and the subset.

The Examiner asserts that the data identifying a code use just for identification adds little, if anything, to the claimed acts or steps and thus do no serve as limitations

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on the claims to distinguish over the prior art. MPEP 2106IV b 1(b) indicates that "nonfunctional descriptive material" is material "that cannot exhibit any functional interrelationship with the way the steps are performed". Any differences related merely to the meaning and information conveyed through data, which does not explicitly alter or impact the steps is non-functional descriptive data. The subjective interpretation of the data does not patentably distinguish the claimed invention.

18. **With respect to claim 30:** (New) Lilly teaches the authenticity code is encrypted. (Lilly: Figs. 17b, 19A and 26C; paragraphs 145-149 – passwords and unique user identification; first user inputs and edits information while second user has the ability to view information; information stored on device; system can be searched aircraft make and model information entered and is searchable)

Please note discussion regarding non-functional descriptive data above.

CONCLUSION

19. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heidi Riviere whose telephone number is 571-270-1831. The examiner can normally be reached on Monday-Friday 9:00am-5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janice Mooneyham can be reached on 571-272-6805. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. R./
Examiner, Art Unit 3689

/Janice A. Mooneyham/
Supervisory Patent Examiner, Art Unit 3689